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AMENDMENTS TO THE CLAIMS

For the Examiner's convenience, all pending claims are set forth below and have been amended where noted:

- 1) (Canceled)
- 2) (Canceled)
- 3) (Canceled)
- 4) (Canceled)
- 5) (Currently Amended) A process for upgrading crude oil from a subterranean reservoir of heavy oil or bitumen, comprising:

converting asphaltenes to steam, power, fuel gas, or a combination thereof for use in producing heavy oil or bitumen from a reservoir;

solvent deasphalting at least a portion of the heavy oil or bitumen to form an asphaltene fraction and a deasphalting oil (DAO) fraction essentially free of asphaltenes having a reduced metals content;

supplying the asphaltenes fraction from the solvent deasphalting to the asphaltenes conversion;

supplying a feed comprising the DAO fraction to a reaction zone of a fluid catalytic cracking (FCC) unit with FCC catalyst to deposit a portion of the metals from the DAO fraction onto the FCC catalyst, wherein lower boiling hydrocarbon fractions are introduced to the FCC unit with the DAO fraction;

recovering a hydrocarbon effluent having a reduced metal content from the FCC unit; and

removing metallized FCC catalyst from the FCC unit.

- 6) (Original) The process of claim 5, further comprising producing heavy oil or bitumen by extraction from mined tar sands.
- 7) (Original) The process of claim 5 further comprising producing heavy oil or bitumen by injecting a mobilizing fluid through one or more injection wells completed in communication with the reservoir to mobilize the heavy oil or bitumen and producing the mobilized heavy oil or bitumen from at least one production well completed in communication with the reservoir.
- 8) (Original) The process of claim 7 wherein the mobilizing fluid comprises steam generated primarily by combustion of asphaltenes recovered from the asphaltenes fraction from the solvent deasphalting.
- 9) (Original) The process of claim 6, wherein the asphaltenes conversion comprises gasification of a portion of the asphaltenes fraction to provide power, steam, fuel gas or combinations thereof for the mining and extraction.
- 10) (Original) The process of claim 5 wherein the solvent deasphalting has a high lift.
- 11) (Original) The process of claim 5 further comprising feeding a portion of the asphaltenes fraction to a delayed coker unit to produce coker liquids and coke.
- 12) (Canceled)
- 13) (Original) The process of claim 5 wherein the FCC unit is operated at a conversion from 30 to 65 percent by volume of the feed to the FCC unit.
- 14) (Original) The process of claim 5 wherein operating conditions in the FCC unit are adjusted to control proportions of naphtha, distillate and gas oil in the hydrocarbon effluent from the FCC unit.
- 15) (Original) The process of claim 5 further comprising hydrotreating the hydrocarbon effluent from the FCC unit to produce a low sulfur hydrocarbon effluent.

- 16) (Original) The process of claim 15 wherein the hydrotreating is effected at a moderate pressure of from 3.5 to 10 MPa.
- 17) (Original) The process of claim 15 further comprising gasifying asphaltenes recovered in the asphaltenes fraction from the solvent deasphalting to produce hydrogen for the hydrotreating.
- 18) (Withdrawn-Previously Presented) A process for upgrading crude oil from a subterranean reservoir of heavy oil or bitumen, comprising:
 - converting asphaltenes to steam, power, fuel gas, or a combination thereof for use in producing heavy oil or bitumen from a reservoir;
 - solvent deasphalting at least a portion of the heavy oil or bitumen containing metals to form an asphaltene fraction and a deasphalting oil (DAO) fraction essentially free of asphaltenes having a reduced metals content;
 - supplying the asphaltene fraction from the solvent deasphalting to the asphaltenes conversion;
 - generating steam by combustion of asphaltenes recovered in the asphaltenes fraction from the solvent deasphalting;
 - supplying a feed comprising the DAO fraction to a reaction zone of a fluid catalytic cracking (FCC) unit with FCC catalyst to recover a demetallized hydrocarbon effluent from the FCC unit at a conversion rate from 30 to 65 percent by volume of the feed to the FCC unit;
 - recovering a hydrocarbon effluent having a reduced metal content from the FCC unit; and
 - hydrotreating the hydrocarbon effluent to produce a low sulfur hydrocarbon effluent.
- 19) (Withdrawn) The process of claim 18 wherein the heavy oil or bitumen production comprises injecting steam through one or more injection wells completed in communication with the reservoir to mobilize the heavy oil or bitumen; and producing

the mobilized heavy oil or bitumen from at least one production well completed in communication with the reservoir.

- 20) (Withdrawn) The process of claim 18 wherein the heavy oil or bitumen production comprises extraction from mined tar sands.
- 21) (Withdrawn) The process of claim 18 further comprising feeding a portion of the asphaltenes fraction to a delayed coker unit to produce coker liquids and coke.
- 22) (Withdrawn) The process of claim 21 comprising feeding the coker liquids to the hydrotreating with the FCC hydrocarbon effluent.
- 23) (Withdrawn) The process of claim 18 further comprising supplying decant oil from the FCC unit to combustion, gasification or a combination thereof.
- 24) (Withdrawn) The process of claim 18 wherein operating conditions in the FCC unit are adjusted to control proportions of naphtha, distillate and gas oil in the hydrocarbon effluent from the FCC unit.
- 25) (Withdrawn) The process of claim 18 wherein the hydrotreating is effected at a moderate pressure of from 3.5 to 10.5 MPa.
- 26) (Withdrawn) The process of claim 18 further comprising gasifying asphaltenes recovered in the asphaltenes fraction from the solvent deasphalting to produce hydrogen for the hydrotreating.

Claims 27 – 44. (Canceled)

Applicant believes that no new matter has been added with these amendments.